

Amendments to the Claims

1. (Cancelled)

2. (Previously Presented) A compound of claim 91, which modulates the expression of thioredoxin.

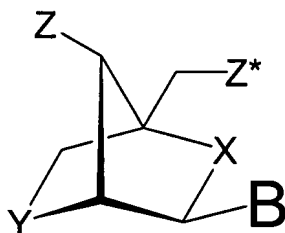
3. (Canceled)

4. (Previously Presented) The compound according to claim 91, which is an antisense oligonucleotide.

5. (Previously Presented) The compound according to claim 91, comprising at least one nucleotide analogue.

6. (Previously Presented) The compound according to claim 91, comprising at least one Locked Nucleic Acid (LNA) unit.

7. (Previously Presented) The compound according to claim 6, wherein the Locked Nucleic Acid (LNA) unit has the structure of the general formula



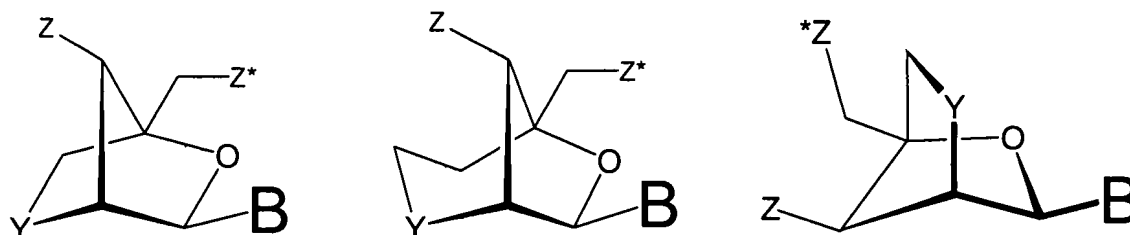
X and Y are independently selected among the groups -O-, -S-, -N(H)-, N(R)-, -CH₂- or -CH- (if part of a double bond), -CH₂-O-, -CH₂-S-, -CH₂-N(H)-, -CH₂-N(R)-, -CH₂-CH₂- or -CH₂-CH- (if part of a double bond), -CH=CH-, where R is selected from hydrogen and C₁₋₄-alkyl ;

Z and Z* are independently absent, selected among an internucleoside linkage, a terminal group or a protecting group;

B constitutes a natural or non-natural nucleobase;

and the asymmetric groups may be found in either orientation.

8. (Original) The compound according to claim 6 or 7, wherein at least one nucleotide comprises a Locked Nucleic Acid (LNA) unit according any of the formulas



wherein Y is independently selected from -O-, -S-, -NH-, and N(R^H);

Z and Z* are independently absent, selected among an internucleoside linkage, a terminal group or a protecting group; and

B constitutes a natural or non-natural nucleobase.

9. (Previously Presented) The compound according to claim 91, wherein the nucleotide analogue comprises an internucleoside linkage selected from the group consisting of -O-P(O)₂-O-, -O-P(O,S)-O-, -O-P(S)₂-O-, -S-P(O)₂-O-, -S-P(O,S)-O-, -S-P(S)₂-O-, -O-P(O)₂-S-, -O-P(O,S)-S-, -S-P(O)₂-S-, -O-PO(R^H)-O-, O-PO(OCH₃)-O-, -O-PO(NR^H)-O-, -O-PO(OCH₂CH₂S-R)-O-, -O-PO(BH₃)-O-, -O-PO(NHR^H)-O-, -O-P(O)₂-NR^H-, -NR^H-P(O)₂-O-, -NR^H-CO-O-, where R^H is selected from hydrogen and C₁₋₄-alkyl.

10. – 13. (Cancelled)

14. (Previously Presented) The compound according to claim 4, wherein the antisense oligonucleotide is a gapmer.

15. (Previously Presented) The compound according to claim 91, wherein the compound is a 13, 14, 15, 16, 17, 18, 19, 20 or 21-mer in length.

16. (Previously Presented) The compound according to claim 91, comprising at least 2 LNA units.

17. – 46. (Cancelled)

47. (Previously Presented) A conjugate comprising the compound according to claim 91 and at least one non-nucleotide or non-polynucleotide moiety covalently attached to said compound.

48. (Previously Presented) A pharmaceutical composition comprising a compound as defined in claim 91 or a salt thereof or a conjugate as defined in claim 47, and a pharmaceutically acceptable diluent, carrier or adjuvant.

49. (Previously Presented) The pharmaceutical composition according to claim 48, further comprising at least one chemotherapeutic agent.

50. (Previously Presented) The pharmaceutical composition according to claim 49, wherein said chemotherapeutic compound is selected from the group consisting of adrenocorticosteroids, such as prednisone, dexamethasone or decadron; altretamine (hexalen, hexamethylmelamine (HMM)); amifostine (ethyol); aminoglutethimide (cytadren); amsacrine (M-AMSA); anastrozole (arimidex); androgens, such as testosterone; asparaginase (elspar); bacillus calmette-gurin; bicalutamide (casodex); bleomycin (blenoxane); busulfan (myleran); carboplatin (paraplatin); carmustine (BCNU, BiCNU); chlorambucil (leukeran); chlorodeoxyadenosine (2-CDA, cladribine, leustatin); cisplatin (platinol); cytosine arabinoside (cytarabine); dacarbazine (DTIC); dactinomycin (actinomycin-D, cosmegen); daunorubicin (cerubidine); docetaxel (taxotere); doxorubicin (adriamycin); epirubicin; estramustine (emcyt); estrogens, such as diethylstilbestrol (DES); etoposide (VP-16, VePesid, etopophos); fludarabine (fludara); flutamide (eulexin); 5-FUDR (floxuridine); 5-fluorouracil (5-FU); gemcitabine (gemzar); goserelin (zodalex); herceptin (trastuzumab); hydroxyurea (hydrea); idarubicin (idamycin); ifosfamide; IL-2 (proleukin, aldesleukin); interferon alpha (intron A, roferon A); irinotecan (camptosar); leuprolide (lupron); levamisole (ergamisole); lomustine (CCNU); mechlorathamine (mustargen, nitrogen mustard); melphalan (alkeran); mercaptopurine (purinethol, 6-MP); methotrexate (mexate); mitomycin-C (mutamucin); mitoxantrone (novantrone); octreotide (sandostatin); pentostatin (2-deoxycoformycin, nipent); plicamycin (mithramycin, mithracin); prorocarbazine (matulane); streptozocin; tamoxifen (nolvadex); taxol (paclitaxel); teniposide (vumon, VM-26); thiotepa;

topotecan (hycamtin); tretinoin (vesanoid, all-trans retinoic acid); vinblastine (valban); vincristine (oncovin) and vinorelbine (navelbine).

51.-52 (Canceled)

53. (Previously Presented) A pharmaceutical composition comprising the compound of claim 91, which is constitutes a pro-drug.

54. (Previously Presented) A pharmaceutical composition comprising the compound of claim 91, which further comprises anti-inflammatory compounds and/or antiviral compounds.

55. – 63. (Cancelled)

64.-74. (Canceled)

75. (Cancelled)

76.-90. (Canceled)

91. (Currently Amended) A compound consisting of a total of 12-50 nucleotides and/or nucleotide analogues, wherein said compound comprises a subsequence of at least 8 nucleotides or nucleotide analogues, said subsequence ~~comprising at least an 8-nucleobase portion of being~~ located within the sequence caaggaatcacgtt (SEQ ID NO:8) and wherein at least one of said nucleotides in said sequence has been replaced by a nucleotide analogue, having the same nucleobase, and wherein said nucleotide analogue is selected from the group consisting of LNA sugar, 2'-O-methyl RNA sugar, 2'-fluoro DNA sugar, 2'-MOE RNA sugar, 2'-O-(3-amino)propyl RNA sugar and 2'-O-(3-hydroxy)propyl RNA sugar..

92. (Canceled)

93. (Previously Presented) The compound of claim 92, wherein said nucleotide analogue is LNA.

94. (Previously Presented) The compound of claim 93, wherein said LNA is selected from the group consisting of thio-LNA, amino-LNA and oxy-LNA.

95. (Previously Presented) The compound of claim 94, wherein said LNA is beta-D-oxy-LNA.

96. (Previously Presented) The compound of claim 91, wherein said compound comprises a subsequence of at least 12 nucleotides or nucleotide analogues.

97. (Previously Presented) The compound of claim 91, wherein said compound consists of a total of 12-20 nucleotides and/or nucleotide analogues.

98. (Previously Presented) The compound of claim 91, wherein said compound comprises the sequence CAAGgaatatcaCGTT (SEQ ID NO:151) or CAAGgaatatcaCGTt (SEQ ID NO:152), wherein uppercase letters denote a beta-D-oxy-LNA and lowercase letters denote a DNA sugar, and wherein said nucleotides and/or nucleotide analogues are linked together by a phosphate group, a phosphorothioate group, or a combination thereof.

99. (Previously Presented) The compound of claim 98, wherein said compound comprises the sequence C₅A₅A₅G₅g₅s₅a₅s₅t₅s₅a₅s₅t₅c₅s₅A₅C₅G₅T₅T (SEQ ID NO:77), wherein uppercase letters denote a beta-D-oxy-LNA and lowercase letters denote a DNA sugar, and wherein the subscript "s" denotes a phosphorothioate linkage.

100. (Previously Presented) The compound of claim 98, wherein said compound consists of the sequence C₅A₅A₅G₅g₅s₅a₅s₅t₅s₅a₅s₅t₅c₅s₅A₅C₅G₅T₅T (SEQ ID NO:77), wherein uppercase letters denote a beta-D-oxy-LNA and lowercase letters denote a DNA sugar, and wherein the subscript "s" denotes a phosphorothioate linkage.

101. (Previously Presented) The compound of claim 98, wherein said compound comprises the sequence C₀A₀A₀G₀g₀s₀a₀s₀t₀s₀a₀s₀t₀c₀s₀A₀C₀G₀T₀T (SEQ ID NO:79), wherein uppercase letters

denote a beta-D-oxy-LNA and lowercase letters denote a DNA sugar, and wherein the subscript "s" denotes a phosphorothioate linkage and the subscript "o" denotes a phosphate linkage.

102. (Previously Presented) The compound of claim 98, wherein said compound consists of the sequence C_oA_oA_oG_og_sa_sa_st_sa_st_sa_st_sc_sa_sC_oG_oT_oT (SEQ ID NO:79), wherein uppercase letters denote a beta-D-oxy-LNA and lowercase letters denote a DNA sugar, and wherein the subscript "s" denotes a phosphorothioate linkage and the subscript "o" denotes a phosphate linkage.

103. (Previously Presented) The compound of claim 98, wherein said compound comprises the sequence C_sA_sA_sG_sg_sa_sa_st_sa_st_sa_st_sc_sa_sC_sG_sT_st (SEQ ID NO:78), wherein uppercase letters denote a beta-D-oxy-LNA and lowercase letters denote a DNA sugar, and wherein the subscript "s" denotes a phosphorothioate linkage.

104. (Previously Presented) The compound of claim 98, wherein said compound consists of the sequence C_sA_sA_sG_sg_sa_sa_st_sa_st_sa_st_sc_sa_sC_sG_sT_st (SEQ ID NO:78), wherein uppercase letters denote a beta-D-oxy-LNA and lowercase letters denote a DNA sugar, and wherein the subscript "s" denotes a phosphorothioate linkage.

105. (Previously Presented) The compound of any of claims 98-104, wherein LNA cytosine (C) is LNA 5' methyl cytosine (5-MeC).